

## Message Text

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ACTION SCI-06

INFO OCT-01 ARA-16 ISO-00 TRSE-00 USIE-00 SSO-00 NSCE-00

INRE-00 CIAE-00 DODE-00 PM-07 H-03 INR-11 L-03

NSAE-00 NSC-07 PA-04 RSC-01 PRS-01 SP-03 SS-20

ACDA-19 IO-14 FEAE-00 AEC-11 AECE-00 AF-10 COME-00

EA-11 EB-11 EUR-25 NEA-14 XMB-07 AID-20 DRC-01 /226 W

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O 082115Z AUG 74

FM AMEMBASSY BRASILIA

TO SECSTATE WASHDC IMMEDIATE 4999

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FOLLOWING RECD FROM AMCONSUL RIO DE JANEIRO DATED 8 AUG 74  
REPEATED FOR YOUR ACTION

QUOTE

RIO DE JANEIRO 2968

E.O. 11652N/A

TAGS: TECH, ENRG, BR

SUBJECT: COMPLETION OF AEC ENRICHMENT CONTRACTING

REF: (A) STATE 169743; (B) STATE 169744; (C) BRASILIA 5929

SUMMARY. CNEN HAS PROVIDED WESTINGHOUSE WITH OUTLINE  
OF BRAZIL'S NUCLEAR ENERGY PROGRAM, USING LIGHT WATER  
REACTORS, FOR THE 1980S. DECISION CONTAINED REFTL  
HAS CAST SERIOUS DOUBTS ON IMPLEMENTATION OF THIS  
PROGRAM DUE TO CURRENT BRAZILIAN PRESUMPTION THAT  
ENRICHED FUEL SUPPLY FROM THE U.S. IS UNRELIABLE.  
CONSIDERABLE CONCERN EXISTS THAT BRAZILIANS MAY,  
ESPECIALLY IF THERE IS INCREASED MILITARY PRESSURE  
BECAUSE OF SECURITY REASONS, SWITCH FROM LIGHT WATER TO  
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HEAVY WATER REACTORS EVEN THOUGH LATTER ARE

CONSIDERED LESS ECONOMICAL. END SUMMARY.

1. ROBERT HEINEMANN AND ROBERT MACDONALD OF WESTINGHOUSE CALLED ON CONGEN OFFICRS AUGUST 7 TO DISCUSS BRAZIL'S NUCLEAR ENERGY PROGRAM. WESTINGHOUSE OFFICIALS PRESENTED COPY OF PAPER, WHICH THEY HAD RECEIVED AUGUST 2 FROM CBTN, OUTLINING BRAZIL'S NUCLEAR ENERGY PLANS. PAPER ALLEGEDLY HAS APPROVAL OF ECONOMIC DEVELOPMENT COUNCIL, WHICH IS CHAIRED BY PRESIDENT GEISEL.

2. FOLLOWING ARE MAJOR POINTS CONTAINED IN PAPER. DEMAND FOR EECTRIC POWER IN SOUTH-CENTRAL AND SOUTHERN BRAZIL WILL RISE FROM PRESENT 13,000 MW TO 65,000 MW BY 1990. TO SATISFY THIS DEMAND, BRAZIL MUST ADOPT NUCLEAR ENERGY PROGRAM THAT WILL ADD 10,000 MW DURING THE PERIOD 1982-90. PROGRAM WILL USE STANDARDIZED TWIN PLANTS OF 2 X 1200 MW CLASS. SUCH A PROGRAM WOULD TEND TO INCREASE SIGNIFICANTLY FOREIGN EXCHANGE COSTS OF BRAZIL'S ELECTRICAL ENERGY, WHICH IS CURRENTLY ABOUT 20 PERCENT OF TOTAL COSTS. IN EFFORT TO MAINTAIN THIS 20 PERCENT COEFFICIENT, BRAZIL WISHES TO ESTABLISH NECESSARY INDUSTRIAL CAPACITY TO PROVIDE MUCH OF THE PLANT EQUIPMENT. SUPPLIER OF NUCLEAR PLANTS WOULD BE EXPECTED, THEREFORE, TO AID BRAZILIAN PUBLIC AND PRIVATE SECTORS IN DEVELOPING DOMESTIC INDUSTRY, INCLUDING FUEL FABRICATING FACILITY OF BETWEEN 100 AND 200 TONS PER YEAR THAT WOULD BE OPERATIONAL BY 1980/81. TO PROVIDE SUFFICIENT STIMULUS FOR PRIVATE INDUSTRIAL SECTOR, CBTN CONSIDERING PLACING INTIHAL LARGE ORDER FOR FOUR UNITS, I.E., TWO INSTALLATIONS WITH TWO UNITS OF 1200 MW EACH. ELECTROBRAS WILL BE CONTRACTING AGENT. IT WOULD HOPE TO LET ENGINEERING CONTRACTS BY END OF 1974 AND PURCHASE CONTRACTS BY END OF 1975, SPECIFYING THAT FOUR PLANTS BECOME OPERATION-AL IN, RESPECTIVELY, 1982, 1983, 1986, AND 1987. (HEINEMANN CLAIMED THAT CONTRACTS WOULD BE LET AT LATER DATE FOR TWO MORE INSTALLATIONS, BUT PAPER MAKES NO SPECIFIC MENTION OF THOSE ADDITIONAL PLANTS.)

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3. WESTINGHOUSE OFFICIALS ASSERTED THAT BRAZILIANS HAD DECIDED TO LIMIT THEIR CONSIDERATION OF POTENTIAL NUCLEAR PLANT SUPPLIERS TO WESTINGHOUSE AND KWU OF GERMANY. THESE TWO FIRMS ALLEGEDLY ARE ONLY SUPPLIERS OF PWR UNITS THAT ARE CONSIDERED LARGE ENOUGH TO IMPLEMENT THE TROAD ENERGY AND RELATED INDUSTRIAL PROGRAMS ENVISAGED BY GOB. PLANTS ALONE WILL COST APPROXIMATELY \$250 MILLION EACH.

4. HEINEMANN ASSERTED THAT, IN ORDER FOR WESTINGHOUSE TO COMPETE EFFECTIVELY, BRAZILIANS MUST BE GUARANTEED A SECURE SUPPLY OF ENRICHED URANIUM IN ORDER TO AVOID NATURAL URANIUM PLANT PROPOSAL FROM BEING SERIOUSLY RECONSIDERED. HEINEMANN STATED THAT BRAZILIANS HAD EARLIER ASKED WESTINGHOUSE EITHER TO BUILD ENRICHMENT FACILITY IN BRAZIL OR TO ESTABLISH ADDITIONAL PLANT IN U.S. BRAZILIANS ALLEGEDLY WERE PREPARED TO TAKE SMALL CAPITAL POSITION IF PLANTS WERE BUILT IN U.S. HE ADDED THAT EVEN IF FUEL PROBLEM WERE RESOLVED, GERMANS WOULD STILL OFFER STIFF COMPETITION FOR CONTRACTS TO SUPPLY NUCLEAR POWER PLANT EQUIPMENT. THUS NEED FOR SATISFACTORY FINANCING TERMS FROM U.S. SOURCE, I.E., EXIMBANK, WOULD BE PARAMOUNT.

NOTE BY OC/T: FEA, TRSY AID PLEASE TAKE AS ORIGINAL

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ACTION SCI-06

INFO OCT-01 ARA-16 ISO-00 CIAE-00 DODE-00 PM-07 H-03

INR-11 L-03 NSAE-00 NSC-07 PA-04 RSC-01 PRS-01 SP-03

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AEC-11 AECE-00 AF-10 COME-00 EA-11 EB-11 EUR-25 NEA-14

XMB-07 DRC-01 /206 W

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5. HEINEMANN TELEPHONED CONGEN LATER SAME DAY TO SAY THAT CNEN TOP OFFICIAL HAD CALLED HIM TO RELATE SUBSTANCE OF REFTEL AS CONVEYED ON AUGUST 5 TO CNEN BY CONGEN OFFICER. CNEN OFFICIAL, CALLING "CONDITIONAL

DECISION" COMPLETELY UNSATISFACTORY, WANTED TO BE SURE THAT HEINEMANN KNOW OF DECISION ON NUCLEAR ENERGY CONTRACT AND WAS AWARE OF ITS IMPLICATIONS, I.E., POSSIBILITY OF MOVE TO HEAVY WATER REACTOR. ACCORDING HEINEMANN, CNEN OFFICIAL REPRESENTS THE STILL DOMINANT BELIEF WITHIN GOB THAT BRAZIL'S NUCLEAR ENERGY PROGRAM SHOULD BE AS ECONOMICAL AND EFFICIENT AS POSSIBLE. THIS OBJECTIVE CAN BEST BE ACHIEVED BY LIGHT WATER REACTORS USING ENRICHED FUEL FROM U.S. HOWEVER, HEINEMANN BELIEVES STRONG PRESSURES EXIST WITHIN GOB, PRINCIPALLY AMONG MILITARY WHO ARE CONSIDERING NATIONAL SECURITY ASPECTS, TO REVERSE THIS POLICY IF U.S. FUEL SUPPLY APPEARS TO BE UNRELIABLE.

6. COMMENT: DECISION CONTAINED REFTEL HAS SHAKEN BRAZILIANS PROFOUNDLY. ALTHOUGH CNEN STILL PREFERS LIGHT WATER REACTOR, IT ASSERTS THAT UNCERTAINTY OF LIMITED OFFICIAL USE

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U.S. FUEL SUPPLY COULD COMPLETELY UPSET PROGRAM THAT WAS OUTLINED TO WESTINGHOUSE. BRAZILIANS ARE INTENT ON MEETING THEIR NUCLEAR ENERGY CONSTRUCTION PROGRAM, AND ARE DEFINITELY AFRAID THAT A BREAKDOWN IN U.S. FUEL SUPPLY WOULD DELAY THEIR PROGRAM, WASTE FINANCIAL RESOURCES, AND CAUSE THEM CONSIDERABLE EMBARRASSMENT. THEY APPARENTLY FEEL THAT HEAVY WATER REACTORS, THOUGH LESS ECONOMICAL, COULD PROVIDE A SUITABLE ALTERNATIVE.

7. GOB UNDOUBTEDLY DESIRES THAT USG DEMONSTRATE MORE INTEREST IN BRAZILIAN NUCLEAR PROGRAM. OUR COMMERCIAL INTERESTS ALONE WOULD SEEM TO JUSTIFY SUCH INTEREST. FIRST ORDER FOR FOUR NUCLEAR PLANTS WILL COST APPROXIMATELY \$1 BILLION, MUCH OF WHICH WOULD BE SUPPLIED FROM U.S. SOURCES IF WESTINGHOUSE OR ANOTHER AMERICAN COMPANY WIN CONTRACT. SUBSEQUENT ORDERS DURING 1980S WOULD BE AT APPROXIMATELY THE SAME MAGNITUDE OF VALUE. MILLER UNQUOTE  
CRIMMINS

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## Message Attributes

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**Copy:** SINGLE  
**Draft Date:** 08 AUG 1974  
**Decaption Date:** 01 JAN 1960  
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**Disposition Authority:** cunninfx  
**Disposition Case Number:** n/a  
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**Disposition Date:** 28 MAY 2004  
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**TAGS:** TECH, ENRG, BR  
**To:** STATE  
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